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Title: Diagnostic utility of sonar guided biopsy in tuberculous effusion

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Body: Tuberculous pleural effusion remains the commonest cause of exudative effusions in areas with a high prevalence of tuberculosis and histological examination of pleural tissue remain the gold standard for its diagnosis. The aim of this study was to assess the diagnostic utility of sonar guided biopsy in tuberculous pleural effusion. Patients and methods: 50 patients of mean age 38.7±16.7 years with pleural effusions and a clinical suspicion of tuberculosis were enrolled in the study. Transthoracic ultrasound was performed on all patients, who were then randomly assigned to undergo ≥4 Abrams needle biopsies followed by ≥4 True-Cut needle biopsies or vice versa. Results: Pleural tuberculosis was diagnosed in 31 patients, alternative diagnoses were established in 16 patients and 3 remained undiagnosed. Pleural biopsy specimens obtained with Abrams needles contained pleural tissue in 46 patients (92.0%) and were diagnostic for tuberculosis in 26 patients (sensitivity 83.8%), whereas True-Cut needle biopsy specimens only contained pleural tissue in 37 patients (74%) and were diagnostic in 17 patients (sensitivity 54.8%). Conclusions: Ultrasound-assisted pleural biopsies performed with an Abrams needle are more likely to contain pleural tissue and have a significantly higher diagnostic sensitivity for pleural tuberculosis.

Diagnostic yield of Abrams and True -Cut needle biopsies (n=50)

Parameter	Abrams	True-Cut	X2	p. value
Pleural tissue present at histology (n=50)	46 (92%)	37 (74%)	4.536	0.033*
Pleural tuberculosis (n=31)	26 (83.8%)	17 (54.8%)	4.857	0.027*
Malignancy (n=13)	11 (84.6%)	9 (69.2%)	0.217	0.642

* Significant

Ref. Froudarakis ME. Diagnostic work-up of pleural effusions. Respiration 2008; 75:4 –13.